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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,091	08/31/2001	David R. Kranz	12942.0067.N	1349

26361 7590 10/18/2002

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EXAMINER

STRICKLAND, JONAS N

ART UNIT PAPER NUMBER

1754

DATE MAILED: 10/18/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

TC-4

<b>Office Action Summary</b>	Application N . 09/944,091	Applicant(s) KRANZ, DAVID R.	
	Examiner Jonas N Strickland	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2001 .
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 16-19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Debbage et al. (US Patent 5,762,885).

Debbage et al discloses an apparatus for removing contaminants from gaseous streams. The reference discloses an apparatus for regenerating a catalyst absorber after contact with a combustion exhaust. The regeneration gas may be comprised of hydrogen and carbon dioxide (col. 5, lines 14-15). The catalyst absorber is comprised of an oxidation catalyst, which is comprised of platinum, palladium, as well as rhodium, which is supported on a high surface area support, such as alumina, zirconia, titania, silica, or combinations thereof (col. 3, lines 29-35). The high surface area support may be coated on a ceramic or metal matrix structure (col. 3, lines 49-50). The oxidation catalyst is coated with an absorber, which comprises alkali or alkaline earth mixtures of hydroxides, bicarbonates, and carbonates (col. 3, lines 53-58 and col. 4, lines 7-14). With respect to claims 16 and 21, Debbage et al continues to teach a turbine exhaust (see Figure 1). Debbage et al continues to disclose a process using a heat recovery steam generator, with respect to claims 17-19 (col. 4, lines 36-53).

### ***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Debbage et al. (US Patent 5,762,885) as applied to claims 1-7, 16-19, and 21 above, and further in view of Courty et al. (US Patent 4,088,736).

Applicant claims with respect to claims 8-15 and 20, wherein the synthesis gas is further cleaned in an acid removal unit.

The teachings of Debbage et al. have been discussed with respect to claims 1-7, 16-19, and 21. Debbage et al. teaches a process for treating pollutants from a turbine in a power-generating stack. However, Debbage et al. does not teach wherein the synthesis gas is cleaned in an acid gas removal unit.

Courty et al. teaches a process for purifying a gas containing hydrogen sulfide from a gasification unit having large amounts of carbon dioxide. Courty et al. continues to teach wherein the hydrogen sulfide is treated with a mass of zinc oxide (see abstract and col. 1, lines 15-46).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Debbage et al., which teaches producing carbon dioxide from a gasification unit and reducing the amount of pollutants produced from the process, such as hydrogen sulfide, based on the teachings of Courty et al., which teaches a process for reducing hydrogen sulfide from a gasification process by passing the gas comprised

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of hydrogen sulfide onto a bed of zinc oxide. Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill in the art, would have expected a gasification process, which includes reducing pollutants, such as hydrogen sulfide as taught by Courty et al., to be similarly useful and applicable to a gasification process for reducing pollutants as taught by Debbage et al.

With respect to claims 10-12, Debbage et al. discloses a shift reactor, a shift catalyst, and wherein the shift catalyst converts carbon monoxide to hydrogen and carbon dioxide (col. 5, lines 28-45).

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to expect the process disclosed by Debbage et al. in view of Courty to convert a carbonyl sulfide to hydrogen sulfide and carbon dioxide, since Debbage et al. teaches a shift catalyst and shift reactor.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N Strickland whose telephone number is 703-306-5692. The examiner can normally be reached on M-TH. 7:30-5:00, off 1st Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0661.



Jonas N. Strickland  
October 12, 2002



WAYNE A. LANGEL  
PRIMARY EXAMINER